Annotator Instructions

Refer to the numbers in the below screenshot for the following instructions:
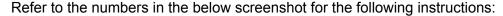

Setup

1 will allow you to select a video file to create annotations for.

Optionally, your own annotation can be supplied at **2** for modification. Annotation files must be a csv, with the first 7 columns corresponding to 'image_id' (frame number), 'track_id', 'x' (box x position), 'y' (box y position), 'w' (box width), and 'h' (box height).

Navigating the video

The scrubber below the video can be used to quickly navigate the video. Pressing 'a' or 'd' will change to the previous or next frame respectively.

You can jump to a specific frame number by using the text field at **12.**

Selecting tracks

A track can be selected by clicking on its box. This selection is carried over to other frames, even frames that do not contain the track.

Multiple tracks can be selected by using Shift-click.

7 displays a list of currently selected tracks.

Adding a new track

With zero (or more than one) tracks selected, a new track can be added by pressing Ctrl-Click.

On MacOS, this can be accomplished by pressing 'b' to toggle the ability to add a track. You can then left-click to add a new track. Press 'b' again when you are finished adding tracks.

Extending an existing track

With exactly one track selected, you can extend that track by first navigating to a frame where that track isn't present. Then Ctrl-Click will insert a new box belonging to the currently selected track.

On MacOS, this can be accomplished by pressing 'b' to toggle the ability to add a box. You can then left-click to add a new box to the currently selected track. Press 'b' again when you are finished extending the current track.

Interpolation

If the 'Interpolation' option (**6**) is selected when extending an existing track to a future frame, additional boxes will be inserted in the intermediary frames using linear interpolation.

Deleting boxes/tracks

3 contains options for deleting boxes or entire tracks.
-'Delete in all frames': Delete the entire track (i.e. across every frame).
-'Delete in current frame': Only delete the box in the current frame.
-'Delete in previous frames': Delete the track in the current frame and all previous frames.
-'Delete in future frames': Delete the track in the current frame and all future frames.

Merging tracks

With exactly 2 tracks selected, press the 'Merge tracks' (**4**) button to merge tracks. The selected tracks will be merged into one, with the first-selected track given priority on frames where they overlap.

Adjusting size of boxes

With any number of tracks selected, **5** controls the size of the boxes. If 'Apply to all frames' is ticked, the size is updated across all frames. Otherwise, the size is only applied to the current frame.

This option can also be used to control the size of newly added boxes/tracks.

Adjusting position of boxes

With one track selected, right-clicking will move the location of the track in the current frame.

Adjusting track ID/colour

6 allows you to update the ID or colour of selected tracks (applied to all frames).

Reverting changes

11 contains options for reverting unintentional changes.
-'Undo last change': Restore the annotations to their state prior to the last action.
-'Revert selected track(s)': Restore selected tracks to their state in the original annotation file.
-'Restore deleted track(s)': Recover all deleted tracks that are present in the original annotation file.

Options for better visibility

13 allows you to toggle several options to improve visibility when dealing ants are clustered.
-'Show only marked': Only display boxes for tracks that have been marked for download.
-'Dot mode': Replace boxes with a dot centered on each ant.
-'Show only nearby': Only display boxes that are within a certain radius (controlled by the distance slider) of selected tracks.

Downloading tracks

10 contains options for downloading annotations. 'Download all tracks' will download a CSV containing all annotations in their current state. 'Download marked tracks' will download a CSV containing only annotations for tracks that have been marked for download.

To mark tracks for download, select them and then toggle their mark (**13**).

Hotkeys

Hovering over buttons will display a tooltip indicating their hotkey.
-'a': Navigate to previous frame
-'d': Navigate to next frame
-'w': Navigate to last frame
-'s': Navigate to first frame
-'b': Toggle mode for adding a new box/track
-'m': Mark selected tracks

-'r': Delete selected tracks in all frames
-'x': Delete selected tracks in current frame

Advanced: Setting video FPS

Using the correct FPS is required for the annotator to function properly.
In case the FPS of the video is not correctly detected, **8** allows you to change the FPS.